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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/220,277	12/23/1998	JAN HERMANUS ELENBAAS	PHA23.590	3711
24737	7590	12/18/2003	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			HUYNH, SON P	
			ART UNIT	PAPER NUMBER
			2611	11
DATE MAILED: 12/18/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/220,277

Applicant(s)

ELENBAAS ET AL.

Examiner

Son P Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7/23/02 (No. 7) and 9/10/03 (No. 10).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Claims 17-40 are withdrawn as indicated in paper No. 10 filed on September 10, 2003.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, lines 6-7, the phrase "of the at least one each story segment" is unclear.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1- 11, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Broadcast News Navigation using Story Segmentation," by Andrew Merlino et al. (hereinafter referred to as Merlino), and in view of "Automatic Parsing of News Video," by HongJiang Zhang et al (hereinafter referred to as Zhang).

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Regarding claim 1, Merlino discloses a system that captures imagery (MPEG), audio (MPA) and closed-caption information. With MPG file, scene change detection and video classification (i.e., black frame, logo, etc.) is performed. Period of silence are detected from the MPA file. With the closed caption file, named entity tagging and token detection is performed. With all of this information, the process is performed to detect stories. With each detected story segment, a theme, gist and key frame is automatically generated and stored in the multimedia database (see page 386, section 4.1+).

Inherently, the system comprising: a story segment identifier for processing a video stream (news stories) and partitioning the video stream into a plurality of story segments, the story segment identifier producing one or more key frames associated with each story segment of the plurality of story segments; Merlino discloses generating

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gist, theme for each detected story segment (page 386, section 4.1, lines 17-18).

However, Merlino does not specifically disclose associating one or more classifications to each story segment of the plurality story segments, to facilitate a selection among the plurality of story segments based on the one or more classification.

Zhang discloses automatic parsing of News Video wherein the news video is partitioned into individual video shots; the partitioned video shots are then classified into anchorperson shots and news shots (see page 47, section 2.2 +). Necessarily, the system comprising a classifier for associating one or more classifications to each story segment of the plurality story segments, to facilitate a selection among the plurality of story segments based on the one or more classification. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Merlino to use the teaching as taught by Zhang in order to provide an easily selection between plurality of story segments.

Regarding claims 2, Merlino teaches the video stream includes an associated text stream (closed caption information); the story segment identifier partitions the text stream into an at least one text segment corresponding to at least one story segment of the plurality of story segments (page 386, section 4.1, lines 17-18).

Zhang teaches the classifier associates the one or more classifications to the at least one story segment based on the at least one text segment (page 47, section 2.2+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was make to modify Merlino to use the teaching as taught by Zhang in order to provide an easily selection among plurality of story segments.

Regarding claims 3, Merlino teaches the video stream includes an associated audio stream (MPA); the story segment identifier partitions the audio stream into an at least one audio segment corresponding to at least one story segment of the plurality of story segments (page 386, section 4.1, lines 17-18).

Zhang teaches the classifier associates the one or more classifications to the at least one story segment based on the at least one audio segment (page 47, section 2.2+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was make to modify Merlino to use the teaching as taught by Zhang in order to provide an easily selection among plurality of story segments.

Regarding claim 4, Merlino in view of Zhang teaches a system as discussed in the rejection of claim 3. However, neither Merlino nor Zhang specifically disclose converting video segment into text segment. Official Notice is taken that converting audio data to text data is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify Merlino and Zhang to use a well-known teaching in the art in order to helps impaired hearing viewers to understand the story easily.

Regarding claim 5, Zhang discloses context information, such as news icon on screen, is also used in classification process (see figures 2-3 and section 2.2.1 +). Necessarily,

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the system includes a visual characterizer, operably coupled to the story segment identifier and the classifier, for providing a visual characterization of at least one story segment of the plurality of story segments based on an image content of the at least one story segment; and wherein the classifier associates the one or more classifications to the at least one story segment based on the visual characterization (anchorperson, news program title bar, anchorperson name bar, background, news icon, etc.)

Regarding claim 6, Zhang teaches the visual characterizer includes: a figure recognizer for recognizing a recognized figure (anchorperson, title bar, etc.) from a plurality of recognizable figures based on the image content; and wherein the visual characterizer characterizes the at least one story segment based on the recognized figure (figures 2-3 and section 2.2+).

Regarding claim 7, Zhang teaches the visual characterizer includes figure recognizer (section 2.2.1+).

Regarding claim 8, Merlino teaches the story segment identifier partitions the video stream based on at least one of a recognized figured, a recognized scene, a video cut, and a detected commercial (page 385, section 3.1.5+).

Regarding claim 9, Zhang teaches the classification include at least one of: program type, news type, media, person, locale, popularity, and keyword (page 47, section 2.2+).

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Regarding claim 10, Merlino teaches each story segment of the plurality of story segments include one or more scenes, and the one or more key frames correspond to a frame within each of the one or more scenes (page 386, section 4.1+ and figures 4.2.2).

Regarding claim 11, Merlino teaches the key frame is determined based upon a transformed of an encoding of the story segment of the plurality of story segment (section 4.1+).

Regarding claim 13, Merlino teaches the video stream is communicated from at least one of: an analog signal broadcast, a digital signal broadcast, a satellite broadcast, a cable broadcast, an Internet connection, a recorder device, and a playback device (page 382, section 3+).

Regarding claim 14, Merlino teaches a storage device (multimedia database- page 386, section 401+ and figure 4.1.1) for storing the plurality of story segments.

Regarding claim 15, Merlino teaches the storage device is a computer memory (database of a PC- page 386, section 4.1+).



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Regarding claim 16, Zhang teaches at least one of the one or more key frames (news items) is a video clip (page 53, line 1+).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over “Broadcast News Navigation using Story Segmentation,” by Andrew Merlino et al. (hereinafter referred to as Merlino), and in view of “Automatic Parsing of News Video,” by HongJiang Zhang et al (hereinafter referred to as Zhang), and further in view of Wactlar et al. (US 5,835,667).

Regarding claim 12, Merlino in view of Zhang teaches a system as discussed in the rejection of claim 11. Merlino further discloses MPEG (page 386, section 4.1). However, neither Merlino nor Zhang specifically disclose the transform includes a discrete cosine transform.

Wactlar teaches the transform includes a discrete cosine transform (col. 12, lines 2-32). Therefore, it would have been obvious to one of ordinary skill in the art to modify Merlino and Zhang to use the teaching as taught by Wactlar in order to improve efficiency.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liu (XP 00062424244) teaches efficient matching and clustering of video shots.

Ahmad et al. (US 6,263,507) teaches browser for use in navigating a body of information, with particular application to browsing information referenced by audiovisual data.

Pullen et al. (US 5,923,376) teaches method and system for the fractal compression of data using an integrated circuit for DCT compression/decompression.

Barton (US 6,327,418) teaches method and apparatus implementing random access and time based function on a continuous stream of formatted digital data.

Warnock et al. (US 6,151,576) teaches mixing digitized speech and text using reliability indices.

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8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 703-306-0377.

Son P. Huynh  
December 11, 2003

  
ANDREW FAILE  
SUPERVISORY PATENT EXAMINER  
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